

REMARKS

The Office Action mailed August 6 , 2003, has been carefully reviewed and by this Amendment, Applicants have canceled claims 1-4, amended claims 5-7 and added claims 9-11. Claims 5-11 are pending.

The Examiner rejected claims 5, 6 and 8 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,879,533 to de Muro et al. (“de Muro”), and rejected claim 7 under 35 U.S.C. 103(a) as being unpatentable over de Muro.

As set forth in amended claim 5 and new claim 9, the present invention reduces intermodulation distortion by providing a structural design for a resonator filter, which implements a plurality of resonators in the resonator filter, each resonator having a cylindrical form which has a ratio of an inside diameter to an outside diameter in a range which is larger than about 1:3 and smaller than or equal to about 1:3.75 and a height (H) as $\lambda/4$, wherein λ is a wavelength of a plane wave provided to the resonator. Resonators having the above mentioned ratio of an inside diameter and outside diameter can reduce intermodulation distortion as shown at Figs. 8 to 11. Further support for these amendments is found in the specification at page 4, line 21 to page 5, line 1; page 8, lines 10 to 16; page 11, lines 2 to 16, and Figs. 1 to 3. Therefore, this structure and method of resonator design reduces intermodulation distortion in a manner not taught in the prior art.

By contrast to the present invention, de Muro does not disclose a specific designing approach for a resonator filter in order to reduce the intermodulation distortion, nor are the above-specified conditions for each of a plurality of resonators disclosed in de Muro. Thus, for at least the foregoing reasons, claims 5 and 9 are patentable over de Muro. Claims 6-8, 10 and 11 are also in

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condition for allowance as claims properly dependent on an allowable base claim and for the subject matter contained therein. Favorable consideration is requested.

With this Amendment, the application is in condition for allowance. Should the Examiner have any questions or comments, the Examiner is cordially invited to telephone the undersigned attorney so that the present application can receive an early Notice of Allowance.

Respectfully submitted,

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